



Part no.: 50133000  
**MSI-SR-LC21DT03-01**  
Safety relay



Figure can vary

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## Technical data

<b>Basic data</b>	
Series	MSI-SR-LC21DT
Application	Base device for E-Stop and safety door applications
<b>Functions</b>	
Functions	Monitoring of E-Stop circuits Monitoring of optoelectronic protective devices Monitoring of position switches Monitoring of proximity switches
Restart	Automatic Manual
<b>Characteristic parameters</b>	
SIL	3 , IEC 61508
SILCL	3 , IEC/EN 62061
Performance Level (PL)	e , EN ISO 13849-1
PFH <sub>D</sub>	0.00000003 per hour
PFH <sub>D</sub>	3E-08 per hour
Mission time T <sub>M</sub>	20 years , EN ISO 13849-1
Category	4 , EN ISO 13849
<b>Electrical data</b>	
<b>Supply circuit</b>	
Nominal voltage U <sub>N</sub>	24 V DC
Min. rated control supply voltage U <sub>s</sub> at DC	20.4 V
Max. rated control supply voltage at DC	26.4 V
Min. rated control supply voltage at DC	20.4 V
Rated power DC	2.6 W
Galvanic isolation between supply and control circuit	No
<b>Output circuit</b>	
Number of outputs, safety-oriented, undelayed, contact-based	2 Piece(s)
Number of outputs, safety-oriented, delayed, contact-based	1 Piece(s)
Release current paths	NO
Release current paths, time-delayed	NO contact, off-delay
Contact material	Ag alloy, gold-plated
Usage category AC-15 (NO contact)	Ue 230V, Ie 3A
Usage category DC-13 (NO contact)	Ue 24V, Ie 2A
Short circuit protection (NO contact)	gG class safety fuse 6A, melting integral
Nominal switching voltage, release current paths AC	230 V
Max. thermal continuous current I <sub>th</sub> , release current paths	6 A
Max. total current I <sup>2</sup> of all current paths	5 A <sup>2</sup>
Mechanical life time	100,000,000 switching cycles

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<b>Control circuit</b>	
Evaluation of the inputs	Two-channel
Nominal output voltage DC	22 V
Input current at the control inputs (safety circuit/reset circuit)	25 mA
Max. peak current at the control inputs (safety circuit/reset circuit)	2,500 mA
Max. cable resistance, per channel	$\leq (5 + (1.176 \times U_B / U_N - 1) \times 100) \Omega$
Minimum switch-on time	200 ms
Response time (automatic start $t_{A2}$ )	700 ms
Response time (manual start $t_{A1}$ )	30 ms
Test pulse time permitted $t_{TP}$	1 ms
Release time $t_R$	25 ms
Release time $t_R$ , time-delayed contacts (tolerance)	0.15 s ... 3 s $\pm$ 16 %
Synchronous time monitoring $t_S$	500 ms
Recovery time $t_W$	500 ms

<b>Connection</b>	
Number of connections	1 Piece(s)
<b>Connection 1</b>	
Type of connection	Terminal
Function	Signal IN Signal OUT Voltage supply
Type of terminal	Screw terminal
No. of pins	16 -pin
<b>Cable properties</b>	
Connection cross sections	1 x 0.2 to 2.5 mm <sup>2</sup> , wire 1 x 0.2 to 2.5 mm <sup>2</sup> , wire 1 x 0.25 to 2.5 mm <sup>2</sup> , wire with wire-end sleeve 2 x 0.2 to 1.0 mm <sup>2</sup> , wire 2 x 0.2 to 1.0 mm <sup>2</sup> , wire 2 x 0.25 to 1.0 mm <sup>2</sup> , wire with wire-end sleeve

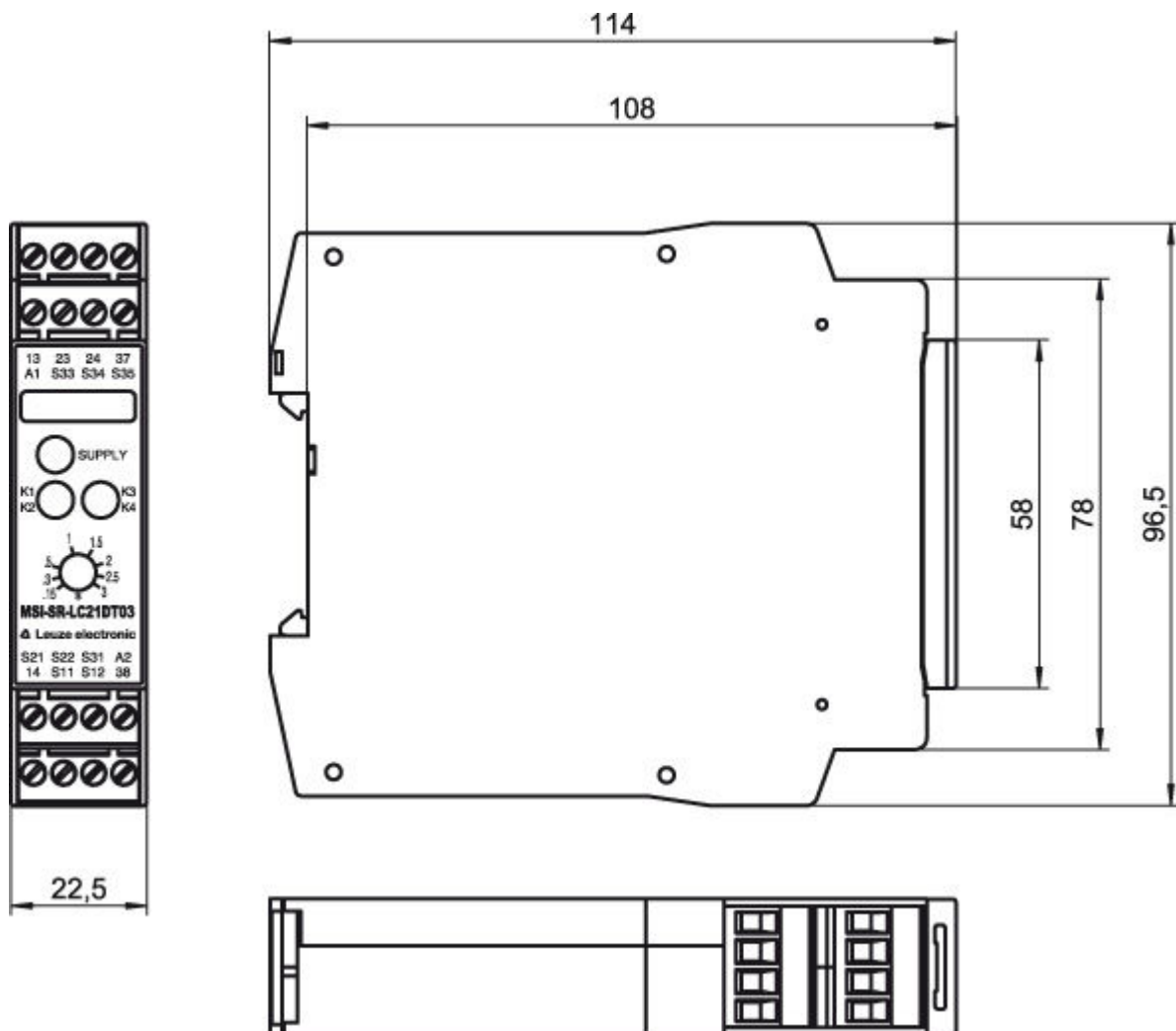
<b>Mechanical data</b>	
Dimension (W x H x L)	22.5 mm x 96.5 mm x 114 mm
Net weight	200 g
Housing color	Gray
Type of fastening	Snap-on mounting

<b>Certifications</b>	
Certifications	c UL US TÜV Rheinland

<b>Classification</b>	
Customs tariff number	85364900
eCl@ss 8.0	27371819
eCl@ss 9.0	27371819
ETIM 5.0	EC001449
ETIM 6.0	EC001449

## Dimensioned drawings

All dimensions in millimeters



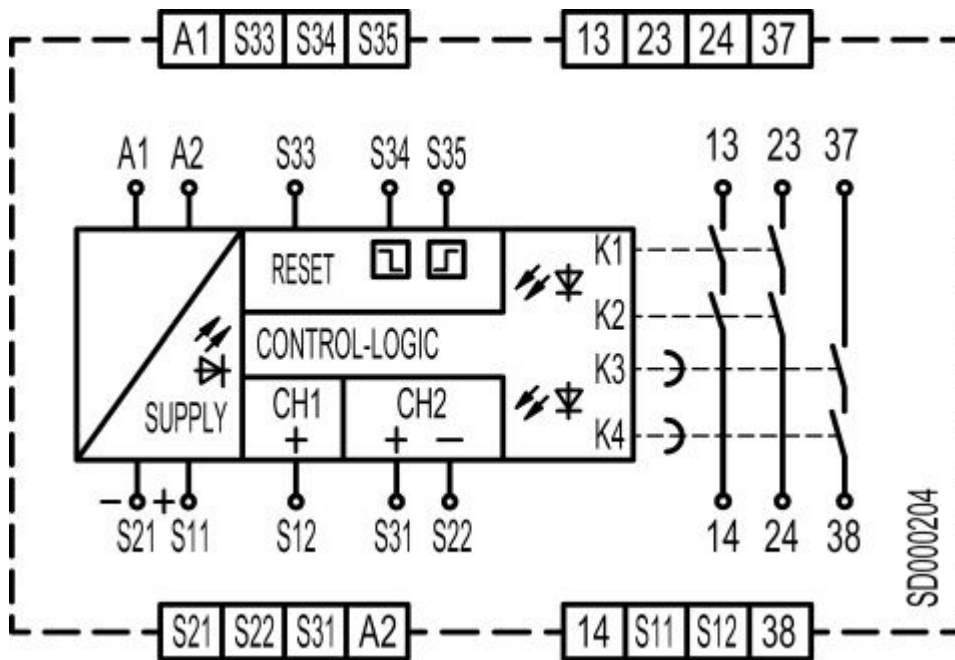
## Electrical connection

Connection 1	
Type of connection	Terminal
Function	Signal IN Signal OUT Voltage supply
Type of terminal	Screw terminal
No. of pins	16 -pin

Terminal	Assignment
13	Release current path 1 (NO contact)
14	Release current path 1 (NO contact)
23	Release current path 2 (NO contact)
24	Release current path 2 (NO contact)
37	Release current path 3 (NO contact)
38	Release current path 3 (NO contact)

Terminal	Assignment
A1	+24V
A2	GND
S11	Control circuit 1
S12	Control circuit 1
S21	Control circuit 2
S22	Control circuit 2
S31	Control circuit 2
S33	Control circuit of reset button
S34	Control circuit of reset button
S35	Control circuit of reset button

### Circuit diagrams



### Notes

**Observe intended use!**

- The product may only be put into operation by competent persons.
- Only use the product in accordance with its intended use.